

10 CFR 50.73

LIC-14-0046 May 14, 2014

U.S. Nuclear Regulatory Commission Attn: Document Control Desk Washington, DC 20555-0001

Fort Calhoun Station, Unit No. 1
Renewed Facility Operating License No. DPR-40
NRC Docket No. 50-285

Subject: Licensee Event Report 2014-003, Revision 0, for the Fort Calhoun Station

Please find attached Licensee Event Report 2014-003, Revision 0. This report is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A), Specified System Actuation (RPS). There are no new commitments being made in this letter.

If you should have any questions, please contact Terrence W. Simpkin, Manager, Site Regulatory Assurance, at (402) 533-6263.

Sincerely,

Louis P. Cortopassi

Site Vice President and CNO

LPC/epm

Attachment

M. L. Dapas, NRC Regional Administrator, Region IV

J. M. Sebrosky, NRC Senior Project Manager

J. C. Kirkland, NRC Senior Resident Inspector

#### APPROVED BY OMB: NO. 3150-0104 EXPIRES: 01/31/2017 NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (02-2014) Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by LICENSEE EVENT REPORT (LER) internet e-mail to Infocollects Resource@nrc.gov, and to the Desk Officer, Office of Information and (See Page 2 for required number of Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB digits/characters for each block) control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection. 1. FACILITY NAME 2. DOCKET NUMBER 3. PAGE 05000285 1 OF 3 Fort Calhoun Station 4. TITLE Reactor Trip Due to Stator Water Cooling Leak During Maintenance 5. EVENT DATE 8. OTHER FACILITIES INVOLVED 6. LER NUMBER 7. REPORT DATE FACILITY NAME DOCKET NUMBER SEQUENTIAL NUMBER RFV YEAR YEAR MONTH YEAR MONTH DAY 05000 NO. FACILITY NAME DOCKET NUMBER 3 17 2014 2014 003 -0 5 14 2014 05000 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) 9. OPERATING MODE 20.2201(b) 20.2203(a)(3)(i) 50.73(a)(2)(i)(C) 50.73(a)(2)(vii) 20.2201(d) 20.2203(a)(3)(ii) 50.73(a)(2)(ii)(A) 50.73(a)(2)(viii)(A) 1 20.2203(a)(1) 20.2203(a)(4) 50.73(a)(2)(ii)(B) 50.73(a)(2)(viii)(B) 20.2203(a)(2)(i) 50.36(c)(1)(i)(A) 50.73(a)(2)(iii) 50.73(a)(2)(ix)(A) 10. POWER LEVEL 50.73(a)(2)(iv)(A) 20.2203(a)(2)(ii) 50.36(c)(1)(ii)(A) 50.73(a)(2)(x) 20.2203(a)(2)(iii) 50.36(c)(2) 50.73(a)(2)(v)(A) 73.71(a)(4) 20.2203(a)(2)(iv) 50.46(a)(3)(ii) 50.73(a)(2)(v)(B) 73.71(a)(5) 100 20.2203(a)(2)(v) 50.73(a)(2)(i)(A) 50.73(a)(2)(v)(C) **OTHER** Specify in Abstract below or in NRC Form 366A 20.2203(a)(2)(vi) 50.73(a)(2)(i)(B) 50.73(a)(2)(v)(D) 12. LICENSEE CONTACT FOR THIS LER LICENSEE CONTACT TELEPHONE NUMBER (Include Area Code) Erick Matzke 402-533-6855 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT MANU-REPORTABLE MANU-REPORTABLE COMPONENT CAUSE SYSTEM COMPONENT CAUSE SYSTEM FACTURER 14. SUPPLEMENTAL REPORT EXPECTED 15. EXPECTED MONTH DAY YEAR SUBMISSION ⊠ NO YES (If yes, complete 15. EXPECTED SUBMISSION DATE) DATE ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) On March 17, 2014, at 12:02 Central Daylight Time (CDT), a turbine trip and subsequent reactor trip occurred while operating at nominal 100 percent power. Maintenance was in progress on the main generator stator cooling system when system inventory was lost resulting in an automatic turbine trip due to low system pressure. Immediate response by operations personnel included implementing procedure emergency operating procedure (EOP) -00. Standard Post Trip Actions, and subsequent entry into procedure EOP-01. Reactor Trip Recovery. Based on plant system response this is considered an uncomplicated trip.

The station determined that the root cause of the plant trip was that operational risk was not effectively identified or mitigated by individuals throughout the organization.

The leak was isolated shortly after the trip by fully removing the probe and closing the isolation valve. Fort Calhoun Station will be implementing the Exelon risk management procedure, WC-AA-104, Integrated Risk Management. This procedure provides direction consistent with industry best practices, and requires individual review of each category of risk identification and mitigation.

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# LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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#### NARRATIVE

# **BACKGROUND**

Fort Calhoun Station (FCS) is a two-loop reactor coolant system of Combustion Engineering design.

# **EVENT DESCRIPTION**

On March 17, 2014, at 12:02 Central Daylight Time (CDT), a turbine trip and subsequent reactor trip occurred while operating at nominal 100 percent power. Maintenance was in progress on the main generator stator water cooling system when system inventory was lost resulting in an automatic turbine trip due to low system pressure. Immediate response by operations personnel included implementing procedure EOP-00, Standard Post Trip Actions, and subsequent entry into procedure EOP-01, Reactor Trip Recovery. Based on plant system response this is considered an uncomplicated trip.

The loss of stator water cooling system inventory occurred during the removal of generator stator water cooling conductivity electrode number CE-5043-1 for calibration. The installed safety knob did not prevent the probe from being removed from the system causing a stator water cooling leak. The technicians were unable to isolate the leak in time to prevent a turbine trip. The leak was isolated shortly after the trip by fully removing the probe and closing the isolation valve.

At 1455 Central Daylight Time (CDT), the Headquarter Operations Officer (HOO) was informed of the event per 10 CFR 50.72(b)(2)(iv)(B) (RPS Actuation) and 50.72(b)(3)(iv)(A) (Specified System Actuation (RPS)). This report is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A), Specified System Actuation (RPS).

### CONCLUSION

Fort Calhoun Station's (FCS's) risk management processes and individual behaviors/mindsets were investigated to determine the root and contributing causes of this event. The RCA team reviewed FCS procedures, standards, and expectations regarding operational risk assessment. Interviews were then conducted to determine if individual behaviors/mindsets and station culture was in line with established expectations.

The investigation concluded that there were shortfalls in individuals' mindsets and in the level of detail in the Station's risk management procedures. Mindsets and accountability contributed to the cause of this event, and current Station procedures and guidelines are not sufficiently detailed to ensure workers are not in a knowledge based performance mode when assessing risk just prior to job execution. Individual behaviors, mindset, and knowledge levels, as well as Station procedures and processes need to be at a level to ensure risk identification and mitigation actions are adequately evaluated prior to the job scheduled start time.

The Station determined that the root cause of the plant trip was that operational risk was not effectively identified or mitigated by individuals throughout the organization.

NRC FORM 366A (02-2014) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104

EXPIRES: 01/31/2017

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#### NARRATIVE

### CORRECTIVE ACTIONS

The leak was isolated shortly after the trip by fully removing the probe and closing the isolation valve.

# Long Term Corrective Actions

To correct the root cause Fort Calhoun Station will be implementing the Exelon risk management procedure, WC-AA-104, Integrated Risk Management. This procedure provides direction consistent with industry best practices, and requires individual review of each category of risk identification and mitigation.

#### SAFETY SIGNIFICANCE

The loss of stator water cooling pressure caused a turbine trip to protect the main generator as designed. Plant safety systems shutdown the reactor plant and support systems operated as designed. One non-safety bus was wetted and then deenergized as a precautionary measure. No equipment was damaged. The plant trip is considered uncomplicated.

#### SAFETY SYSTEM FUNCTIONAL FAILURE

This does not represent a safety system functional failure in accordance with NEI 99-02, revision 7.

### **PREVIOUS EVENTS**

None.